REPLACEMENT SHEET

100 —

```
        ┌─────────────────┐
        │      102        │
        │     START       │
        └─────────────────┘
                 │
        ┌─────────────────┐
        │            104  │
        │  INPUT DATA     │
        │  SEQUENCE       │
        └─────────────────┘
                 │
        ┌─────────────────┐
        │  FORM DATA  106 │
        │  SEQUENCE INTO  │
        │  INPUT SYMBOL   │
        │  SEQUENCE       │
        └─────────────────┘
                 │
        ┌─────────────────┐
        │ MULTIPLY INPUT 108 │
        │ SYMBOL SEQUENCE │
        │ BY TRANSMISSION │
        │ MATRIX          │
        └─────────────────┘
                 │
        ┌─────────────────┐
        │  MODULATE   110 │
        │  AND            │
        │  UPCONVERT      │
        └─────────────────┘
                 │
        ┌─────────────────┐
        │ SEND TRANSMIT 112 │
        │ SYMBOL          │
        │ SEQUENCE        │
        └─────────────────┘
```

```
        ┌─────────────────┐
        │ RECEIVE    114  │
        │ TRANSMIT        │
        │ SYMBOL SEQUENCE │
        └─────────────────┘
                 │
        ┌─────────────────┐
        │ DOWNCONVERT 116 │
        │ AND DEMODULATE  │
        └─────────────────┘
                 │
        ┌─────────────────┐
        │ MULTIPLY TRANSMIT │
        │ SYMBOL SEQUENCE │
        │ BY TRANSPOSE OF 118 │
        │ TRANSMISSION MATRIX │
        └─────────────────┘
                 │
        ┌─────────────────┐
        │            120  │
        │ REFORMAT DATA   │
        │ FROM SYMBOLS    │
        └─────────────────┘
                 │
        ┌─────────────────┐
        │            122  │
        │ OUTPUT DATA / END │
        └─────────────────┘
```
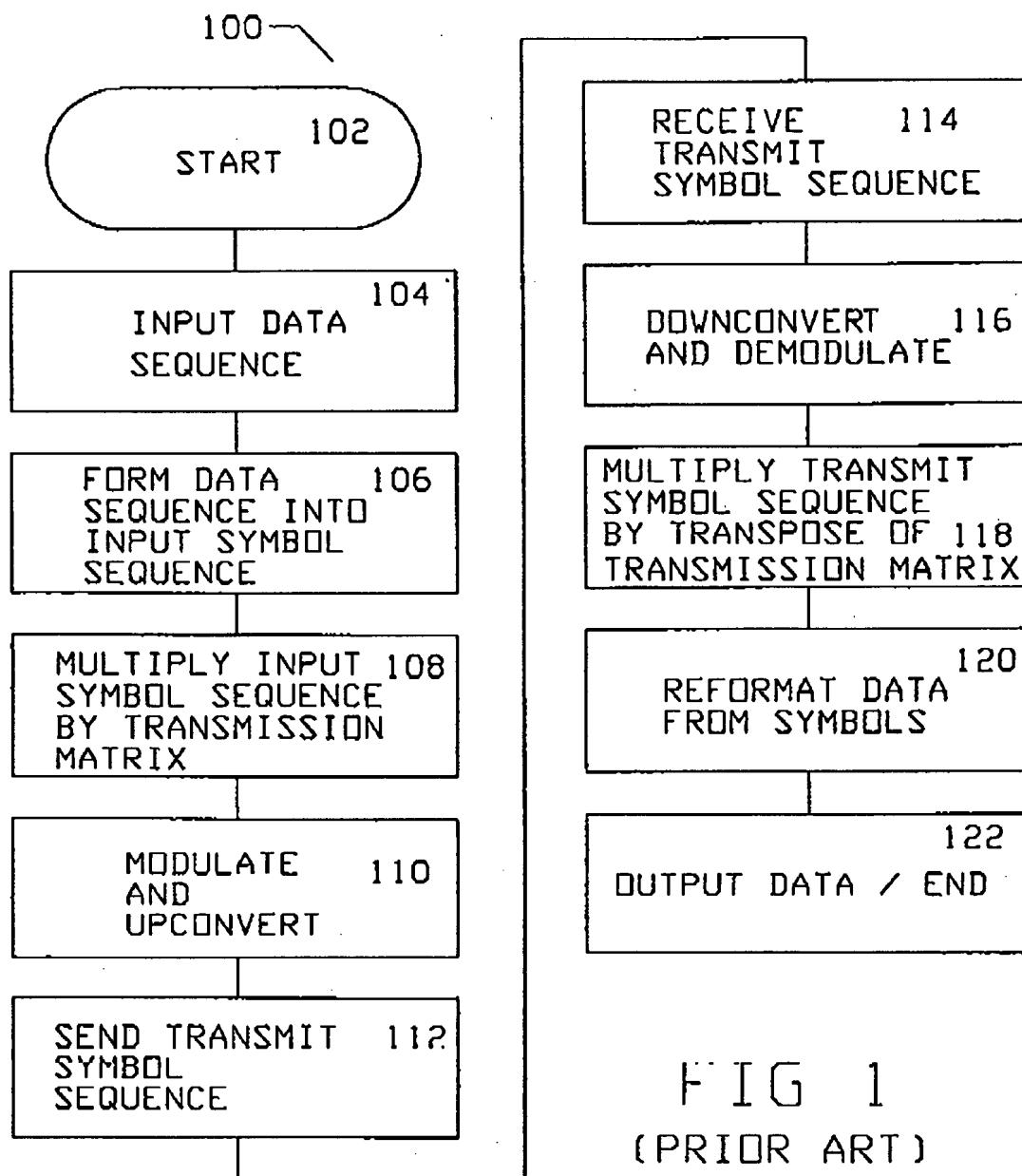
FIG 1

(PRIOR ART)

REPLACEMENT SHEET

— 300

$E = [0 \ 1 \ 0 \ -1 \ 0]$ ⌐302   < INPUT SYMBOL SEQUENCE

$$C = \begin{vmatrix} 1 & 2 & 3 & 4 & 5 & 1 \\ -5 & -4 & -3 & -2 & -1 & 4 \\ 3 & 2 & -3 & -1 & -2 & -3 \\ 3 & -4 & -2 & 2 & 1 & 2 \\ 3 & -4 & 5 & 2 & 1 & -3 \end{vmatrix}$$ ⌐304   < 2 DIMENSIONAL TRANSMISSION MATRIX

⌐306

$F = E \cdot C = [-8 \ 0 \ -1 \ -4 \ -2 \ 2]$ < TRANSMIT SYMBOL SEQUENCE

$F5 = [-8 \ 0 \ -1 \ -4 \ 2]$ ⌐308   < RECEIVED SYMBOL SEQUENCE WITH CORRUPT TERM REMOVED

$$C5 = \begin{vmatrix} 1 & 2 & 3 & 4 & 1 \\ -5 & -4 & -3 & -2 & 4 \\ 3 & 2 & -3 & -1 & -3 \\ 3 & -4 & -2 & 2 & 2 \\ 3 & -4 & 5 & 2 & -3 \end{vmatrix}$$ ⌐310   < TRANSMISSION MATRIX WITH CORRUPT COLUMN REMOVED

⌐312

$$K5 = \begin{vmatrix} -.3528 & -.4410 & -.3658 & .2529 & -.1712 \\ -.0110 & -.1388 & -.0739 & -.0233 & -.1304 \\ -.2335 & -.2918 & -.3891 & .0350 & -.0545 \\ .6005 & .5006 & .5564 & -.1401 & .2179 \\ -.3268 & -.4086 & -.5447 & .2490 & -.2763 \end{vmatrix}$$ < INVERSE OF C5 IS A RECOVERY MATRIX

⌐314

$G = F5 \cdot K5 = [0 \ 1 \ 0 \ -1 \ 0]$ < OUTPUT SYMBOL SEQUENCE

FIG 3